

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



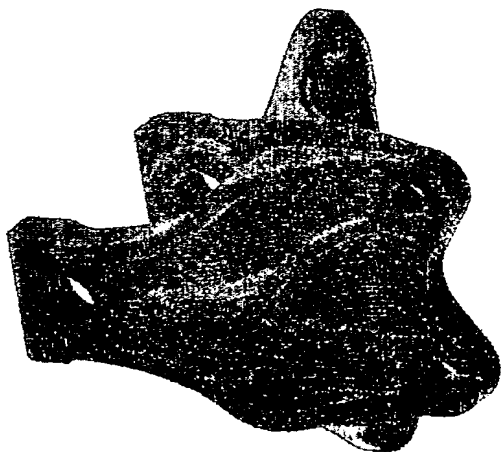
(43) International Publication Date
14 July 2005 (14.07.2005)

PCT

(10) International Publication Number
WO 2005/064488 A1

- (51) International Patent Classification⁷: **G06F 17/10**, 7/60, 17/50, G06G 7/48
- (21) International Application Number: PCT/US2004/042910
- (22) International Filing Date: 20 December 2004 (20.12.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 60/531,380 19 December 2003 (19.12.2003) US
- (71) Applicant (for all designated States except US): **ESI GROUP** [FR/FR]; 6 Rue Hamelin, 75116 Paris Cedex, Paris (FR).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **YUAN, Wei**, [CN/US]; 1234 Meadow Park Drive, Huntsville, Alabama 35803 (US). **DOLLAR, Tim W.**, [US/US]; 125 Spring Water Drive, Madison, Alabama 35758 (US). **HARRAND, Vincent J.**, [NL/US]; 1421 Chandler Road, Huntsville, Alabama 35801 (US).
- (74) Agent: **SHOUSE, Emily A.**; Waddey & Patterson, Bank of America Plaza, 414 Union Street, Suite 2020, Nashville, Tennessee 37219 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:
— with international search report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHODS FOR GENERATING DIGITAL OR VISUAL REPRESENTATIONS OF A CLOSED TESSELLATED SURFACE GEOMETRY



(57) Abstract: The present invention is a method that creates perfectly closed tessellated surface geometries suitable for application in mesh generation, engineering and mathematical analysis, visualization, and animation (figure 6).

WO 2005/064488 A1

BEST AVAILABLE COPY